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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,453	04/05/2005	Francis Mattlage Snodgrass	1603.1001	3042

21831 7590 01/02/2008
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EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
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1791

NOTIFICATION DATE	DELIVERY MODE
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01/02/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO@WOLFBLOCK.COM

Office Action Summary

Application No.

10/530,453

Applicant(s)

SNODGRASS, FRANCIS
MATTLAGE

Examiner

Barbara J. Musser

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Specification

1. Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim does not further limit claim 1 as claim 2, from which claim 17 is dependent, already requires the adhesive compositions of claim 17.

Claim Objections

2. Claims 6 and 14 are objected to because of the following informalities: I line 2, "assembly" is incorrect as the claim requires a verb at that location grammatically. It is suggested this should be --assembled--. Appropriate correction is required.

3.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 3, and 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 17, it is unclear how the adhesive can be a polyolefin when claim 1 requires the adhesive to be cured and polyolefin adhesive such as polyethylene are thermoplastic, i.e. not curable.

6. Claim 7 recites the limitation "the steel strip" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is noted that claim 8, which depends from claim 15, requires the metal to be steel.

Regarding claim 11, it is unclear how this claim further limits claim 3 as it appears to be a substantial duplicate of claim 3, having all the limitations thereof.

7. Claim 15 recites the limitation "the steel strip" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. It is noted that claim 16, which depends from claim 15, requires the metal to be steel.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 5, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass(U.S. Patent 4,810,545) in view of Takeda et al.(U.S. Patent 4,094,056) and Gregornik et al.(U.S. Patent 4,024,008)

Snodgrass discloses extruding a matrix strip which defines a longitudinal channel(16) which is joined to a metal base during or after extrusion.(Col. 2, ll. 18-22) The reference does not disclose extruding the matrix material onto a metal strip which has a resin adhesive on the surface or heating it to cure the adhesive and join the matrix and metal foil. Takeda et al. discloses extruding a polymer onto a metal strip

having adhesive thereon.(Col. 2, ll. 16-18) The reference discloses the use of adhesive is preferable, suggesting that use of an adhesive forms a better product than not using an adhesive. The reference does not disclose the type of adhesive. Gregornik et al. discloses applying a thermoplastic to a heat-curable adhesive on a metal surface and then heating to cure the adhesive.(Col. 2, ll. 25-50) This yields a highly superior bond.(Col. 2, ll. 25-27) It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a curable adhesive to the metal strip of Snodgrass and then extrude the matrix strip onto the adhesive which is then heated to cure since Takeda et al. discloses extruding a polymer onto an metal preferably having an adhesive thereon, suggesting the presence of the adhesive is desirable when bonding polymer and metal, and since Gregornik et al. discloses using an adhesive, which can be thermosetting, yields a superior bond.(Col. 2, l. 25-27)

Regarding claim 2, Gregornik et al. discloses the adhesive can be polyurethane.(Col. 2, ll. 50)

Regarding claims 3 and 11, Takeda et al. discloses applying the adhesive before the metal strip passes through the die where polymer is applied.(Figure 1) While the reference does not disclose applying the adhesive immediately before the die, this is because the adhesive is dried before passing through the die. One in the art would appreciate that when an adhesive which does not need to be dried was used, the adhesive would be applied immediately before the extruder.

Regarding claim 5, since the adhesive is a thermosetting adhesive, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

pass the metal strip through a heating zone after extrusion since this would cure the adhesive, which is heat-curable, i.e. thermosetting.

Regarding claim 6, Snodgrass discloses applying a double sided adhesive tape to the bottom of the metal strip.(Col. 3, ll. 3-8) While it does not disclose this occurs after cooling and pulling off the assembly line, one in the art would appreciate that this could occur before or after cooling and removal from the assembly line and is within the purview of one in the art. While the reference does not disclose cutting, one in the art would appreciate that extrusion is a continuous process and discrete portions of the product are used in the final apparatus, indicating that the strip must be cut to form the final desired length.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass, Takeda et al., and Gregornik et al. as applied to claim 1 above, and further in view of Smith et al.(U.S. Patent 5,407,702).

The references cited above do not disclose the extruded plastic being guided by heated rollers before contacting the metal strip.(Col. 2, ll. 65-69; Figure1) These rollers thin the extruded polymer.(Col. 3, ll.5-7) It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a set of heated rollers immediately after the extruder since this would thin the extrudate before it is applied to the metal strip.(Col. 3, ll. 5-6) While the reference does not disclose the rollers are adjustable, one in the art would appreciate that the rollers would be adjustable to vary the thickness of the polymer extrudate(since the reference suggests a range of extrudate thicknesses after the rollers.(Col. 3, ll. 10-11)

11. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass, Takeda et al., and Gregornik et al. as applied to claim 1 above, and further in view of the admitted prior art.

Snodgrass does not disclose what the metal the matrix material is attached to is. The admitted prior art discloses that matrix materials are generally attached to steel strips.(Pg. 1) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the metal strip of Snodgrass, Takeda et al., and Gregornik et al. from steel since the admitted prior art discloses that matrix materials are generally attached to steel strips.(Pg.1)

Regarding claim 7, Snodgrass discloses the matrix material can be polypropylene.(Col. 2, ll. 14-15)

12. Claims 9 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass, Takeda et al., Gregornik et al., and the admitted prior art as applied to claims 8 and 11 above, and further in view of Smith et al.(U.S. Patent 5,407,702).

The references cited above do not disclose the extruded plastic being guided by heated rollers before contacting the metal strip.(Col. 2, ll. 65-69; Figure1) These rollers thin the extruded polymer.(Col. 3, ll.5-7) It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a set of heated rollers immediately after the extruder since this would thin the extrudate before it is applied to the metal strip.(Col. 3, ll. 5-6) While the reference does not discloses the rollers are adjustable, one in the art would appreciate that the rollers would be adjustable to vary

the thickness of the polymer extrudate(since the reference suggests a range of extrudate thicknesses after the rollers).(Col. 3, ll. 10-11)

Regarding claims 9 and 18, the references cited above do not disclose conditioning and degreasing the metal strip prior to extrusion. Smith et al. discloses conditioning the metal strip to improve bonding.(Col. 2, ll. 43-48) It would have been obvious to one of ordinary skill in the art at the time the invention was made to condition the metal strip prior to bonding since this would improve bonding.(Col. 2, ll. 43-48) While the references do not disclose degreasing the metal strip, it is well-known and conventional in the metal bonding arts to degrease the metal to remove any materials which would impede adhesion, and one in the art would do so for that reason.

Regarding claim 13, since the adhesive is a thermosetting adhesive, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pass the metal strip through a heating zone after extrusion since this would cure the adhesive, which is heat-curable, i.e. thermosetting.

Regarding claim 14, Snodgrass discloses applying a double sided adhesive tape to the bottom of the metal strip.(Col. 3, ll. 3-8) While it does not disclose this occurs after cooling and pulling off the assembly line, one in the art would appreciate that this could occur before or after cooling and removal from the assembly line and is within the purview of one in the art. While the reference does not disclose cutting, one in the art would appreciate that extrusion is a continuous process and discrete portions of the product are used in the final apparatus, indicating that the strip must be cut to form the final desired length.

Regarding claim 15, Snodgrass discloses the matrix material can be polypropylene.(Col. 2, ll. 14-15)

Regarding claim 16, the admitted prior art discloses the metal is steel.(Pg. 1)

Regarding claim 17, Gregornik et al. discloses the adhesive can be polyurethane.(Col. 2, ll. 50)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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